A. barbarus, var. *massaicus*; it has nothing to do with *A. barbarus*, but is very closely related to *A. pulchellus*.

12. *Arvicanthis abyssinicus*, Rüpp.

Six specimens of various ages.

13. *Leggada minutoides*, Sm.

One. This name is used for the smaller chestnut-brown form.

14. *Leggada musculoides*, Temm.

One. This name is used for the larger grey-brown form.

The two forms seem to be found side by side in various parts of Africa; but we must wait for more evidence before positively stating their relationship or otherwise.

XXXV.—*On a Collection of Rodents from Angola.*

By W. E. de Winton.

Through the kindness of Prof. Barboza du Bocage, of the Lisbon Museum, I have been entrusted with the working out of a number of rodents from Angola to be ultimately presented to the British Museum. My primary object was to endeavour to explain the various forms of *Georychus* found in this region, our Museum being very well supplied with forms from other parts of Africa. The results of my work are given below, and it will be seen that the *Georychi* were not the only animals of interest in the collection, a dormouse and a mouse being described as new.

Graphiurus angolensis, sp. n.

General colour drab-brown mixed with whitish, most of the underfur appearing to be tipped with the latter colour. All the underparts creamy white. Bases of all the body-fur above and below slate-black. Upper lips, cheeks, throat, hands, and feet entirely cream-white. Ears sparingly clothed with short brown hairs. Tail drab-brown, flecked with white, most of the hairs being tipped with white; these pale tips increase in length towards the distal portion, till at the extreme end the hairs may be entirely of the pale colour, forming a cream-white tag. The tail is bushy and flattened beneath; the hairs increase in length, graduating from the body to the tip.

Mammæ 2—2=8, 1 axillary, 1 behind the elbow, 1 on the extreme front of groin, 1 on groin.

Type ♀ in al. 92. 1. 9. 9 British Museum.

Loc. Caconda, Angola.

Measurements:—Head and body 96 millim.; tail 74; hind foot 18·4; ear 14; end hairs of tail 20.

In a male specimen the head and body measure 103, tail 84.

Skull: greatest length 30 millim.; greatest breadth 16·5; breadth of brain-case 14; constriction 4·6; nasals 11·7 × 4; interparietal bone 4 × 9·9; height above auditory bullæ 12; height at front of palate 5·1; basal length 26; henselion to back of palate 9·3; back of palate to foramen mag. 14; palatal foramina 3·5 × 2·6; diastema 6·6; molar series 3·6; outside $\frac{\text{ms.}^1}{}$ 6·2, inside 4. Mandible (bone only), length 15·2, height at coronoid 8·3.

The most noticeable character in the skull which distinguishes this animal from its ally *G. murinus* is its greater height and more rounded shape; the skull is deeper in proportion, through the brain-case and auditory bullæ, than any *Graphiurus* yet described; the teeth also differ in pattern.

I have selected a specimen received from the Lisbon Museum on a former occasion as the type of this species. The present collection contains two specimens from Galanga; one of these is very interesting, its tail being in the peculiar state which led Dr. Jentink into proposing the genus *Claviglis*. This disease seems to be rather common in the African dormice. The bones of the tail coalesce distally and waste away, the tail gradually getting shorter; about six or more vertebræ are affected at the same time, forming a single bone tapering to a point, the muscles also wasting away. One specimen in the Museum has only a length of 5 millim. of healthy tail left at the base; in another the tail is normal for about 20 millim. The skin thickens in converse proportion to the wasting of the bone, so that the tail becomes club-shaped; and the shorter the tail becomes the broader is the end of the club. The disease does not affect the growth of the hair, for in one specimen the hairs are 27 millim. in length. The animals seem well nourished and otherwise healthy.

Otomys Anchietæ, Bocage.

One adult female, Caconda.

Very long clitoris. Four very small inguinal mammæ. Shows very slight iridescent purple and green colours when wet.

Mus, sp.

Two mice in the collection from Caconda belong to the multimammate group.

Mus Thomasi, sp. n.

All the upper parts uniform grizzled rufous brown; all the

underside greyish white, the bases of the hairs above and below slate-black. Ears almost round, sparsely covered with short reddish-brown hairs. Tail unicoloured brown, practically naked, though evenly covered with short stiff hairs. Scales in rings 10 to 9 millim. Feet very short and stout. Hind feet with only 5 pads, 1 and 2 well developed, 3, 4, and 5 small, hardly more than 1 millim. in length.

Loc. Galanga.

Measurements of type, ♂ in al., B.M. no. 97. 8. 6. 14:— Head and body 155 millim.; tail 120; hind foot 26; ear 19·5 × 17.

Skull: greatest length 36 millim.; greatest breadth 18; brain-case 15; constriction 5·5; nasals 14·5 × 4·5; interparietal bone 4·6 × 9; basal length 32; henselion to back of palate 17; back of palate to foramen magnum 12·5; palatal foramina 9·6 × 2·5; diastema 10·3; molar series 6·5; outside $\frac{\text{ms.}^1}{}$ 7·5, inside 3·6. Mandible length (bone only) 20, height at coronoid 10·7.

This is a peculiarly *Dasymys*-like rat in shape and texture of fur; in colour it closely resembles *Dasymys Bentleyæ*. The skull is also somewhat *Dasymys*-like, having rather strong zygomata, broad teeth, and long narrow palatal foramina; the latter are peculiar, reaching to fully the middle of the first molar, so that their length very nearly equals that of the diastema. When damp the fur shows iridescent colours of dark green, but not nearly so bright as in the next species.

The specific name is given in honour of the head of the Mammal Department of the British Museum, to perpetuate his connexion with this genus.

Dasymys nudipes, Peters.

One male, Caconda; one male, Hanha.

This animal shows very beautiful dark iridescent green colours when wet.

Golunda fallax, Peters.

Male and female, Hanha.

Shows no iridescent colours when wet.

Saccostomus mashonæ, de Winton.

Saccostomus mashonæ, de Winton, P. Z. S. 1896, p. 804.

Male and female, Caconda.

Although these specimens differ in colour (being uniform drab) from those from the typical locality, I can find no differences in the skulls, and we do not know sufficiently about seasonal changes to separate these mammals on colour alone.

Georychus Mechowi, Peters.

Georychus Mechowi, Peters, Jorn. Sci. Lisb. 1890, p. 271.

One female, Galanga.

It is much to be regretted that the skull of this fine specimen is badly broken, as it is the largest *Georychus* skull yet received in the British Museum, exceeding that of the one figured by Prof. Bocage.

Georychus Bocagei, sp. n.

Colour pale grey-drab, almost silver-grey; a deep purple stain at the corners of the mouth (no doubt due to the nature of its food). Head very large, measuring about one third of the total length. No white occipital spot (?).

Type ♂ (aged) in al., B.M. no. 97. 8. 6. 22.

Hanha, Angola.

Head and body 150 millim.; tail 15; hind foot 25.

Skull: greatest length 39 millim.; greatest breadth 30; temporal constriction 9; brain-case 15·5; nasals 15 × 3·5; basal length 35; henselion to back of palate 23; diastema 13·2; molar series 6; outside $\frac{\text{ms.}1}{}$ 7. Mandible, greatest length of bone 30·5, height at coronoid 17.

The skull is broader and stronger than that of *G. hottentottus*, but the zygomata are not bowed out in the anterior portion so much as in that species or *G. damarensis*, but, like the latter, the inner face of the arch is turned upwards. The infraorbital foramina are long and narrow, broadest in the lower portion, the outer wall thin or moderate. Intermaxillary processes extending on the forehead rather beyond the nasals, the latter narrowing posteriorly and ending in a point in the middle line. The tooth-row appears to be somewhat shorter than in *G. hottentottus*; the palate ends posteriorly in a projecting point in the middle line.

I name this species in honour of the distinguished naturalist who has done so much in advancing our knowledge of the fauna of Angola. There are in the present collection ten specimens from various localities.

In working out the Angolan *Georychi* I fully appreciate the difficulties mentioned by Prof. Bocage (Jorn. Sci. Lisb. 1890, 2 ser. iv. p. 269), and have come to very much the same conclusions. Without definitely separating the forms, that from Hanha is described as a new species, a fully adult specimen being taken as the type. When more complete series are obtained the various forms may be found to be separable into local subspecies; but as fully adult specimens are still wanting from several of the localities, I do not see my way at present to divide them.

G. damarensis, a white-spotted form, certainly occurs in Angola, for the British Museum contains a specimen collected there by Dr. Welwitsch, and some of the forms may be referred to this species; but most of the specimens are rather young for determination. *G. hottentottus*, *G. damarensis*, and *G. Bocagei*, having the naso-frontal suture of somewhat the same pattern, the skulls are difficult to distinguish when young. The occipital spot is undoubtedly a variable character, as I find in normally unspotted forms, such as *G. Nimrodi*, an occasional specimen with a small white spot, and in the normally large-spotted form, *G. Darlingi*, an occasional specimen turns up with only a very small white spot; thus it may be possible outwardly to almost perfectly match specimens of these two otherwise very widely distinct species; this only shows how necessary it is to have far larger series of these animals before we can say whether age, sex, or season has anything to do with their varying exteriors.

XXXVI.—*On the Excretory Organs and Blood-vascular System of* Tetrastemma graecense, *Böhmig*. (A Provisional Communication.) By Dr. L. Böhmig, of Graz *.

The freshwater Nemertine which I observed in the year 1892 in a reservoir in the Botanical Gardens here I have again discovered in greater numbers in the same place, and have been enabled to submit it to closer investigation. I devoted my attention especially to the excretory and sexual organs, and now give a short statement of some of the results of my researches.

Although the plates for my memoir on *Tetrastemma graecense* were finished a considerable time ago, the publication of the paper itself has been greatly delayed, partly in consequence of my professional duties and partly owing to the examination of a land Nemertine found in the hothouse of the local Botanical Gardens.

In specimens to which a moderately strong pressure has been applied there is readily recognizable on each side of the body a system of clear ramifying canals, from 4·26 to 11·36 μ in diameter, which communicate one with another and permeate the animal throughout its entire length. In the anterior extremity of the body, in the region of the brain and in front of it, I observed only a single canal of larger size, which was disposed in manifold sinuosities and loops, and ultimately became broken up into a fine close-meshed network of very small canalicules; at the posterior end of the body I failed to discover a terminal plexus of this kind. Into the coarser

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